

IN THE CLAIMS

1. (Currently Amended) A method of producing an electron-emitting device having a carbon fiber, comprising:

(A) applying a liquid which includes including dispersed particles onto a substrate; and

~~(B) oxidizing said particles disposed on the substrate and then reducing then; and~~

~~(C) a step of (B) forming a carbon fiber by contacting the reduced particles applied on the substrate with a carbon containing gas,~~

wherein each of said particles contains at least two kinds of elements (i) Pd and (ii) at least one element selected from the group consisting of Fe, Co, Ni, Y, Rh, Pt, La, Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, and Lu.

2. - 3. (Canceled)

4. (Currently Amended) The method according to claim [[3]] 1,
wherein each of said particles contain at least one contains said element selected from the group consisting of ~~Fe, Co, Ni, Y, Rh, Pt, La, Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, and Lu~~ by 5 atm% or more and 80 atm% or less (atomic percentage) with respect to Pd.

5. (Original) The method according to claim 1, wherein said liquid further contains a polymer.

6. (Original) The method according to claim 5, wherein said polymer is a water-soluble polymer.

7. (Original) The method according to claim 5, wherein said polymer is any one selected from the group consisting of polyvinyl pyrrolidone, polyvinyl alcohol and polyacrylic acids.

8. (Original) The method according to claim 7, wherein said polyacrylic acids are any one selected from the group consisting of polyacrylic acid, polymethacrylic acid, and homologue thereof.

9. (Original) The method according to claim 5, wherein said polymer is contained by 0.1 wt% or more and 30 wt% or less with respect to said liquid.

10. (Original) The method according to claim 5, wherein said polymer is contained by 0.2 wt% or more and 10 wt% or less with respect to said liquid.

11. (Currently Amended) The method according to claim 1, wherein
~~said an~~ average particle size of the particles is 1 nm or more and 100 nm or less.

12. (Currently Amended) The method according to claim 1, wherein
~~said an~~ average particle size of the particles is 1 nm or more and 50 nm or less.

13. (Currently Amended) The method according to claim 1, wherein
~~said an~~ average particle size of the particles is 1 nm or more and 20 nm or less.

14. (Original) The method according to claim 5, wherein said polymer covers the particles by average film thickness in a range of 2.5 nm or more and 25 nm or less.

15. (Original) The method according to claim 1, wherein said particles are contained by a ratio of 1 g/L or less with respect to said liquid.

16. (Original) The method according to claim 1, wherein said particles are contained by a ratio of 0.1 g/L or less with respect to said liquid.

17. (Original) The method according to claim 15, wherein said particles are contained by a ratio of 0.01 g/L or more with respect to said liquid.

18. (Canceled)

19. (Currently Amended) A method of producing an electron-emitting device having a carbon fiber, comprising:

(A) a step of applying a liquid which includes including dispersed particles containing a catalytic metal onto a substrate; and

(B) a step of oxidizing the particles disposed on the substrate; and

(C) a step of reducing the particles and (B) forming a carbon fiber by contacting the reduced particles applied on the substrate with a carbon containing gas,
wherein said particles are contained by a ratio of 1 g/L or less with
respect to said liquid.

20. (Currently Amended) A method of producing an electron-emitting device having a carbon fiber, comprising

(A) applying a liquid with including a polymer and a large number plurality of catalytic particles dispersed having catalytic function onto a substrate; and

(B) oxidizing the particles disposed on the substrate; and

(C) reducing the oxidized particles and (B) forming a carbon fiber by contacting the reduced catalytic particles with a carbon containing gas.

21. (Original) The method according to claim 1, wherein said carbon fiber is any one of a carbon nano tube, a graphite nano fiber, an amorphous carbon fiber, and a diamond fiber.

22. (Original) A method of producing an electron source having a plurality of electron-emitting devices, wherein said electron-emitting devices are produced by the method of producing an electron-emitting device according to claim 1.

23. (Original) A method of producing an image-forming apparatus comprising an electron source, and an image-forming member disposed facing said electron source, wherein said electron source is produced by the method of producing an electron source according to claim 22.

24. - 28. (Canceled)

29. (New) The method according to claim 20, wherein said particles contain (i) Pd and (ii) at least one element selected from the group consisting of Fe, Co, Ni, Y, Rh, Pt, La, Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, and Lu by 5 atm% or more and 80 atm% or less (atomic percentage) with respect to Pd.

30. (New) The method according to claim 20, wherein said polymer covers the particles.

31. (New) A method of producing an electron source having a plurality of electron-emitting devices, wherein said electron-emitting devices are produced by the method of producing an electron-emitting device according to claim 20.

32. (New) A method of producing an image-forming apparatus comprising an electron source, and an image-forming member disposed facing said electron source, wherein said electron source is produced by the method of producing an electron source according to claim 31.

33. (New) The method according to claim 19, wherein said particles contain (i) Pd and (ii) at least one element selected from the group consisting of Fe, Co, Ni, Y, Rh, Pt, La, Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, and Lu by 5 atm% or more and 80 atm% or less (atomic percentage) with respect to Pd.

34. (New) The method according to claim 19, wherein said liquid further comprises a polymer.

35. (New) A method of producing an electron source having a plurality of electron-emitting devices, wherein said electron-emitting devices are produced by the method of producing an electron-emitting device according to claim 19.

36. (New) A method of producing an image-forming apparatus comprising an electron source, and an image-forming member disposed facing said electron source, wherein said electron source is produced by the method of producing an electron source according to claim 35.